

Work Order ID 91135

October-03-12 9:00:28 AM

91135

Page 1

Item ID: D2620

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Item Name: Skidtube, 206 Skidtube

Stop ***NS2***

Start Date: 02/10/2012 Start Qty: 10.00

10

Cust Item ID:

Required Date: 05/12/2012 Req'd Qty: 10.00

10

Customer:

Reference:

Approvals:

Process Plan: MLS

Date: 12-10-03 Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|

Draw Nbr

Revision Nbr

D2620

Rev B

100

0.00

100

Skidtubes

Skidtubes

Memo

0.00

Skidtubes

1-Bend extrusion as per Dwg D2620 using CNC Bending Machine program
206.A and Folio Ft0082- Cut Fwd end of tube as per Dwg D2620

- DC 13/04/30

110

QC5- Inspect part completeness to step on W/O

0.00


110

QC

Memo

0.00

Quality Control

10 0 13-04-30 

120

Identify as per dwg & Stock Location: LG

0.00

120

Packaging

Memo

0.00

Packaging

 10 0 13-04-30

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

| | | | | | | | | | | | |
|--------------------------------------------------------------|------|------|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------|--------------|--|--|
| Work Order: _____ Part No. _____ NCR No. _____ | | | | DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/> | | AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div> | | | | | |
| Root Cause | Date | Step | Qty | Description of work order update or Non-conformance | Initial Chief Eng | Action Description | Sign & Date | Verification | QC Inspector | | |
| Doc/Data <input type="checkbox"/> | | | | | | | | | | | |
| Equip/Tooling <input type="checkbox"/> | | | | | | | | | | | |
| Operator <input type="checkbox"/> | | | | | | | | | | | |
| Material <input type="checkbox"/> | | | | | | | | | | | |
| Setup <input type="checkbox"/> | | | | | | | | | | | |
| Other <input type="checkbox"/> | | | | | | | | | | | |
| Process <input type="checkbox"/> | | | | | | | | | | | |
| Supplier <input type="checkbox"/> | | | | | | | | | | | |
| Training <input type="checkbox"/> | | | | | | | | | | | |
| Unapproved <input type="checkbox"/> | | | | | | | | | | | |

| FAULT CATEGORY | | | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube | General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio | <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions | <input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other | |

Work Order ID 91135***91135***

Page 2

October-03-12 9:00:28 AM

Item ID: D2620

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Skidtube, 206 Skidtube

Start Date: 02/10/2012 Start Qty: 10.00

10

Cust Item ID:

Required Date: 05/12/2012 Req'd Qty: 10.00

10

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|--------------------------------|---------------------------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| 130 | QC21- Final Inspection - Work Order Release | 0.00 | | | | | | | |
| *130* | | | | | | | | | |
| QC | Memo | 0.00 | | | | | | | |
| Quality Control | | | | | | | | | |

13/5/3
113-04-30

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

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| Material <input type="checkbox"/> | | | | | | | | | | | |
| Setup <input type="checkbox"/> | | | | | | | | | | | |
| Other <input type="checkbox"/> | | | | | | | | | | | |
| Process <input type="checkbox"/> | | | | | | | | | | | |
| Supplier <input type="checkbox"/> | | | | | | | | | | | |
| Training <input type="checkbox"/> | | | | | | | | | | | |
| Unapproved <input type="checkbox"/> | | | | | | | | | | | |

| FAULT CATEGORY | | | | |
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Picklist Print

October-03-12 9:00:32 AM

Page 1

Work Order ID: 91135

91135

Parent Item: D2620

D2620

Parent Item Name: Skidtube, 206 Skidtube

Start Date: 02/10/2012

Required Date: 05/12/2012

Start Qty: 10.00

Required Qty: 10.00

Comments: IPP D02.07.26Change Dwg to rev.B; Updated LocationRF

| Component Item ID/ Item Name | Replacement Item ID | Mfg/ Purch | Bin Item | Primary Location | Last Location | Route Seq ID | Unit of Measure | Qty on Hand | Qty per Kit | Total Qty | Qty Issued | Date Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|

| | | | | | | | | | | | | | |
|-------------|--|--------------|----|--|--|-----|------|---------|---|----|--|--|--|
| D2600-1-160 | | Manufactured | No | | | 100 | Each | 43.0000 | 1 | 10 | | | |
|-------------|--|--------------|----|--|--|-----|------|---------|---|----|--|--|--|

D2600-1-160

Extrusion Round 3" 206

**

DC 13/04/30

| <u>Location</u> | <u>Loc Qty</u> | <u>Loc Code</u> |
|-----------------|----------------|-----------------|
| LG | 43 | |
| 43969 | 2 | |
| 59875 | 1 | |
| 68284 | 2 | |
| 76913 | 38 | |
| 86331 | 0 | |

(10)

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

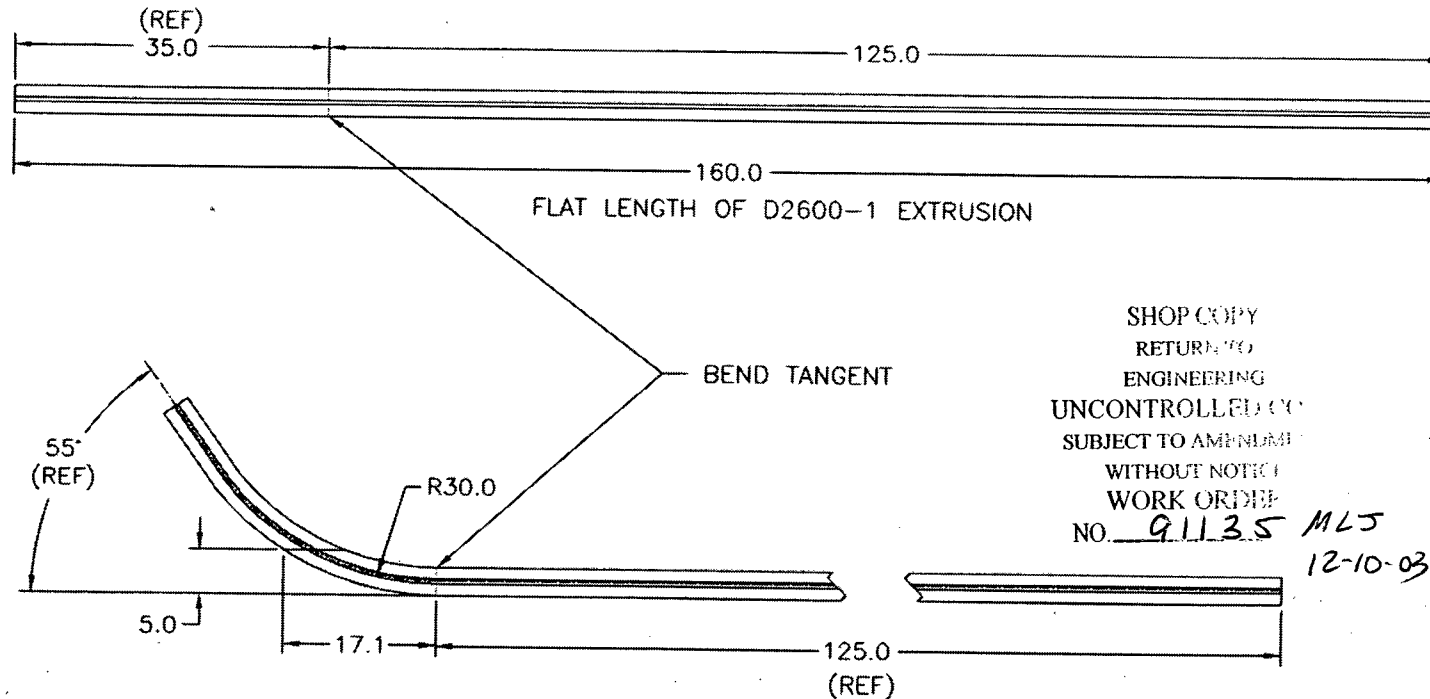
QA Closed: _____ Date: _____

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| Setup <input type="checkbox"/> | | | | | | | | | | | |
| Other <input type="checkbox"/> | | | | | | | | | | | |
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| Supplier <input type="checkbox"/> | | | | | | | | | | | |
| Training <input type="checkbox"/> | | | | | | | | | | | |
| Unapproved <input type="checkbox"/> | | | | | | | | | | | |

| FAULT CATEGORY | | | | |
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SPECIFICATION CONTROL DRAWING

206 SKIDTUBE BENDING



DAMAGE TOLERANCE

1. THERE SHOULD BE NO VISIBLE WRINKLES BELOW 5.0 AFTER BENDING.
2. GOUGES UP TO 0.020 DEEP ARE ACCEPTABLE IN BENT PORTION OF THE TUBE. NO GOUGES ARE ACCEPTABLE IN THE FLAT PORTION OF THE TUBE. DEEPER GOUGES ARE ACCEPTABLE IN THE PORTION OF THE TUBE ABOVE 5.0.
3. TUBE WIDTH SHOULD BE 3.20 ± 0.200 IN THE BEND. TUBE WIDTH SHOULD BE 3.200 ± 0.010 IN THE FLAT PORTION OF THE TUBE.
4. TUBE HEIGHT SHOULD BE 3.15 ± 0.200 IN THE BEND. TUBE HEIGHT SHOULD BE 3.150 ± 0.010 IN THE FLAT PORTION OF THE TUBE.

NOTE: ALL DIMENSIONS ARE IN INCHES



| | | | | | |
|--------|----------|---------|----------|----------|-----------------------------------------------------------------|
| DESIGN | DATE | CHECKED | APPROVED | DRAWN BY | DART AEROSPACE USA, INC. FAIRCHILD INTERNATIONAL AIRPORT, WA |
| A | 99.09.10 | ML5 | ML5 | ML5 | REV. B |
| B | 97.09.10 | | | | SHEET 1 OF 1 SCALE 1:20 |
| | | | | | TITLE |
| | | | | | D2620 |
| | | | | | 206 SKIDTUBE BENDING CONTROL |
| | | | | | NEW ISSUE |
| | | | | | UPDATE FOR IN-HOUSE BENDING |

RELEASED
49 04 15 DS